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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,387	10/17/2006	Akira Mizuno	2006_1640A	9383

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EXAMINER	
MCKANE, ELIZABETH L	

ART UNIT	PAPER NUMBER
1797	

NOTIFICATION DATE	DELIVERY MODE
05/12/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/594,387	MIZUNO ET AL.	
	Examiner	Art Unit	
	ELIZABETH L. MCKANE	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 April 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-4* is/are allowed.

6)☒ Claim(s) *5-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (JP 2002-360672) in view of Lin et al. (US 5,876,666).

With respect to claims 5 and 8, Takahashi teaches a sterilization apparatus including a chamber **3**, a vacuum pump **13**, a hydrogen peroxide supply unit **23**, an ozone supply unit **6**, an exhaust unit **13**, and a catalyst **14**. Takahashi is silent with respect to a plasma generation unit.

Lin et al. discloses a plasma source **50**, used at the end of a sterilization process and after evacuation of the chamber to "remove any residual hydrogen peroxide remaining on the sterilized articles." See col.10, lines 49-53; col.11, lines 32-48. It would have been obvious to one of ordinary skill in the art at the time of the invention to

employ a plasma generation unit in the apparatus of Takahashi to assure removal of residual hydrogen peroxide from the articles after sterilization.

As to the use of the ozone supply unit "for supplying ozone…before the chamber reaches atmospheric pressure," it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

With respect to claim 7, Takahashi teaches that the remaining ozone is 'destroyed' by the exhaust unit. The examiner submits that one of ordinary skill in the art would understand this term to mean that the ozone is broken down into oxygen and water, as this is how ozone decomposes.

As to claim 6, Takahashi is silent with respect to an antiscattering member. However, Lin et al. teaches an enclosure **10** and valve **14a** which would reduce scattering. It would have been obvious to use the sterilant supply means of Lin et al. as being sterilant supply means known in the art, where the results of doing so are not unexpected.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi and Lin et al. as applied to claim 5 above, and further in view of Lin et al. (US 6,224,828).

Takahashi is silent with respect to a gas circulation unit. Lin et al. '828 teaches a hydrogen peroxide sterilization apparatus wherein a pump **18** is employed to circulate the gas within the sterilization chamber. It would have been obvious to provide a gas

circulation unit within the chamber of Takahashi in order to assure adequate contact of the sterilant with the objects therein.

5. Claims 10 and 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi and Lin et al. as applied to claim 5 above, and further in view of Destrez et al. (US 2005/0109739).

Although Takahashi with Lin et al. teaches use of an electrode for the generation of plasma, the claimed electrode configuration is not disclosed. However, the claimed configuration is evidenced by Destrez et al. which teaches a plasma generator for a sterilization system. The generator includes a high-voltage electrode **26** connected to a high-voltage power source **20** and a low-voltage electrode **28** connected to ground **32**. See figure 3. Destrez et al. further teaches that the high-voltage electrode includes a plurality of point electrodes (see Figure 2). An insulator **30** is disclosed to be positioned between the high-voltage electrode and the low-voltage electrode - i.e. the high-voltage electrode is 'surrounded' by the insulator. See paragraph [0042]. It would have been obvious to employ the plasma generator of Destrez et al. for that of the combination since Destrez et al. teaches that the inventive plasma generator is an effective plasma generator giving reproducible effects over an extended period of time.

Allowable Subject Matter

6. Claims 1-4 are allowed.

7. The following is an examiner's statement of reasons for allowance: Takahashi teaches that hydrogen peroxide is evacuated before the ozone is introduced into the

chamber. Thus, there is no step of diffusing both hydrogen peroxide and ozone within the chamber and in fact, would be counter-intuitive to do so since Takahashi wishes to limit the amount of ozone necessary to be used by removing as much hydrogen peroxide as possible from the chamber before the ozone is added. Thus, when the ozone is added, the only remaining hydrogen peroxide in the chamber is that absorbed/attached to the articles within the chamber which is incapable of 'diffusing'.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELIZABETH L. MCKANE whose telephone number is (571)272-1275. The examiner can normally be reached on Mon-Fri; 5:30 a.m. - 2:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elizabeth L McKane/
Primary Examiner, Art Unit 1797

elm
9 May 2010